

## INTERNATIONAL JOINT COMMISSION

IN RE THE APPLICATIONS OF THE ST. CROIX WATER POWER CO. AND THE SPRAGUES FALLS MANUFACTURING CO. (LTD.), FOR APPROVAL OF A DAM AND POWER CANAL AND THE OBSTRUCTION, DIVERSION, AND USE OF THE WATERS OF THE ST. CROIX RIVER AT GRAND FALLS IN THE STATE OF MAINE AND THE PROVINCE OF NEW BRUNSWICK.

## ORDER OF APPROVAL

November 9, 1915

The above applications having come on for hearing at the city of Calais, in the State of Maine, on the 15th day of June, 1915, and having been continued to the 5th, 6th, and 7th days of October, 1915, at the city of Ottawa, Canada, on which last day the hearing was concluded, the said applications relating to the same subject matter being consolidated and heard as one application, and due notice of the filing of said applications and of the time and place of the said hearings having been given to all parties interested in both countries, the commission having heard the evidence adduced by all parties interested, including the statements of the engineer representatives of the United States and the Dominion of Canada in respect thereto, and also having heard counsel on behalf of all parties interested, finds as follows:

(a) The St. Croix Water Power Co. is incorporated by special act of the legislature of the State of Maine (ch. 203, Acts of 1899), and the Spragues Falls Manufacturing Co. (Ltd.) is incorporated by statute of the Dominion of Canada (2 Edward VII, ch. 103), both companies being incorporated for substantially the same purpose.

(b) Acting upon the supposition that no other authority was necessary than that given them by the aforesaid acts of incorporation, the said companies, acting in unison, proceeded to construct, and did construct, at Grand Falls a dam across the St. Croix River and a power canal on the United States side of the St. Croix River to convey the waters of the river to a power house situate a short distance below the dam, which dam is for the purpose and has the effect of obstructing and holding back the waters of the said river.

(c) The dam is of the Ambursen type. It is 820 feet long between the present Canadian shore line and the international boundary and 280 feet long between the present United States shore line and the international boundary, with an abutment on the Canadian shore 40 feet long and an abutment on the United States shore 100 feet long.

(d) The crest of the dam for a length of 80 feet on the United States side of the international boundary and for a length

of 218 feet on the Canadian side is at an elevation of 193.70 above mean sea level; for a length of 540 feet on the Canadian side it is at an elevation of 198.10 feet above mean sea level; and for a further length of 22 feet on the United States side and 54 feet on the Canadian side it is at an elevation of 205.10 above mean sea level. Flashboards at an elevation of 201.20 above mean sea level cap the whole of the two lower sections of the crest. In the dam on the Canadian side are two submerged sluices 6 feet by 8 feet, with sills at an elevation of 167.60. These are controlled by gates operated by electric power. On the United States side are nine Tainter regulating sluice gates 14 feet wide, with sills at an elevation of 196.10 and a log sluice at the shore end. The dam as now constructed contains no fishway.

(e) The power canal leaves the west branch of the St. Croix River a short distance above the dam and near the junction of the east and the west branches of the river. It is 2,700 feet long, 50 feet wide on the bottom at elevation 185.10, and 115 feet wide at elevation 202.10. This canal joins the St. Croix River a short distance below the dam, and at the junction is a power house having therein at present two (with space for a third) 54-inch Holyoke wheels with capacity of 4,000 horsepower each, under a 49-foot head.

(f) Provision for a fishway has been made in the dam at the lower end of the power canal. This fishway has been designed to permit the passage of fish up and down stream through the power canal, but the fishway is not yet completed.

The log sluiceway above referred to in the dam across the river is ample for the purpose of driving logs or lumber downstream.

(g) The two companies have constructed and are now using the said dam and power canal at Grand Falls for the purpose of generating power supplied to the pulp and paper mill now owned by the St. Croix Paper Co. at Woodland, in the State of Maine, a few miles farther down said stream.

(h) The St. Croix River is a boundary water within the meaning of the treaty of January 11, 1909, between Great Britain and the United States of America. The effect of the said dam and power canal as constructed and maintained is to divert the waters of the said St. Croix River on the Canadian side and cause them to flow through the State of Maine, thereby altering the levels on the United States side of the international boundary; also to divert the waters of the said river on the United States side of the said boundary, thereby altering the levels of the waters of the said river on the Canadian side of the said boundary.

(i) The applicants are owners of the riparian lands on both sides of the said river which are affected by the change of the levels of the said river.

The companies having applied to the commission for its approval of the said dam and its maintenance and operation and of the obstruction, diversion, and use of said waters, and it appearing to the commission that such approval should be granted;

Therefore, it is hereby ordered that the maintenance and operation of the dam aforesaid and the diversion and use of the waters of said river for the purpose in paragraph (g) hereinbefore contained, be, and the same are hereby, approved upon and subject to the following conditions:

1. That the applicants have obtained, or shall hereafter obtain, from the United States and the Dominion of Canada within their respective jurisdictions authority for the maintenance of the said dam as constructed and the obstruction, diversion, and use of the waters of the St. Croix River at Grand Falls, in the State of Maine and the Province of New Brunswick, for the said purpose.

2. In case the waters so diverted cease to be used for the purpose mentioned in paragraph (g), this order of approval shall thereupon cease to be operative unless the commission, upon the application of the United States or the Dominion of Canada, continue it on such terms and conditions as the commission may prescribe.

3. All the sluices, log sluices, flashboards, bypasses, power plant, and storage reservoirs shall be so operated as to prevent the level of the water at the dam rising above 202 (mean sea-level datum). For this purpose the operation of all the said works, canals, headgates, sluices, and log sluices of all kinds, dams, and bypasses shall be under the direct control of the board hereinafter designated.

4. All the sluices, log sluices, power plants, and storage dams shall be so operated as to pass continuously the minimum discharge of the river plus such other quantity as the board of control shall determine is available.

5. To enable the board to determine the quantity of water that should be passed downstream, two gauges for registering the precipitation shall be established by the two Governments at suitable stations in the valley of the said river.

6. An officer to be appointed by the Governor General in Council of Canada and one to be appointed by the Secretary of War of the United States shall form a board whose duty it shall

be to formulate rules under which the sluice gates, log sluices, power works, and storage dams are to be operated to prevent as nearly as possible a higher level than 202 (mean sea-level datum) and to secure to the users of water below Grand Falls the flow of water to which they are entitled. It shall be the further duty of this board to see that any rules or regulations now or hereafter made by proper authority are duly obeyed.

7. The power company at Grand Falls shall keep continuous records, satisfactory to the board, which will show the quantity of water used by it, and shall furnish to the board, when required, full information from such records.

8. The board will determine at all times the amount of water to be passed to the users of water below, and the owners of the said dam and power canal for the time being shall supply the necessary labor for the operation of the various gates.

9. The cost of maintaining all parts of the dam and all sluices and log sluices shall be borne by the owners thereof, and this work of maintenance shall be done in a manner satisfactory to both Governments.

10. In the event of a disagreement between the members of said board, in respect to anything required of said board herein, or in respect to the duties or powers of said board, or as to the exercise of such duties or powers, the question at issue shall, upon the application of either Government, be referred to this commission for its decision.

Dated at New York, N.Y., November 9, 1915.

O. GARDNER  
C.A. MAGRATH  
JAMES A. TAWNEY  
H.A. POWELL  
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